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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,902	06/24/2003	H. Martin Harmless II	12055-37418	2180

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EXAMINER

HOEY, BETSEY MORRISON

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/602,902

Applicant(s)

HARMLESS ET AL.

Examiner

Betsey M. Hoey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-18 is/are allowed.
- 6) ☒ Claim(s) 19 is/are rejected.
- 7) ☒ Claim(s) 20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 20, "method...including at least two enclosures" is awkward and unclear, because a method should include steps, not just structural elements.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,997,752 to Leu et al. Leu et al. disclose a method for enhancing the solubility of ozone in water comprising conveying water by a high pressure pump into a closed container, keeping the container interior at a preset pressure, subjecting the water in the container to ozonation and supersonic vibration, and discharging the treated water.

The claim differs from Leu et al. by reciting that the water is subjected to ultrasound rather than supersound, and that the water is discharged into a storage tank. It is submitted that the frequency of the sonic waves produced by the invention of Leu et al., is variable, and thus the vibrator is capable of emitting ultrasonic waves. It is further submitted that it would have been obvious to one of ordinary skill in the art, at the time

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the present invention was made, to have emitted ultrasonic waves rather than supersonic waves, depending on the water being treated and results desired. It is further submitted that although Leu et al. do not comment on the specific vessel that the treated water is discharged to, one of ordinary skill in the art, at the time the present invention was made, would have been motivated to discharge the water to some type of storage container (or "tank") in order to transport the treated water to another location until desired use.

5. Claims 1-18 are allowed.

6. Claims 20 and 21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of claim 19.

7. The following is a statement of reasons for the indication of allowable subject matter:

Claims 1-11 are allowed because the prior art of record fails to teach, disclose, or fairly suggest a device for purifying polluted water, comprising a water tank having an enclosure with water an ozone sensors therein; sonification generator, ozone source, and pump in communication with the enclosure; and microprocessor in communication with the sensors, ozone source and pump; wherein the microprocessor is capable of receiving signals from the sensors and transmitting signals to actuate a water inlet and outlet through the enclosure.

Claims 12-18 are allowed because the prior art of record fails to teach, disclose, or fairly suggest a device for purifying polluted water, comprising a water tank having at

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least two enclosures, water and ozone sensors in each enclosure, a sonification generator and ozone source in communication with each enclosure, a pump between the water and enclosures, and a microprocessor adapted to receive and transmit signals as recited in instant claim 12.

Claims 20 and 21 would be allowable if rewritten in independent form including all of the limitations of claim 19, because the prior art of record fails to teach, disclose, or fairly suggest a method for purifying polluted water, comprising electronically monitoring and controlling the pumping, pressurizing, subjecting to ozone and ultrasound, and discharging steps as recited in claim 19, in the manner recited in claim 20.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsey Hoey whose telephone number is **(571) 272-1158**. The examiner can normally be reached on Mondays, Tuesdays, and Thursdays. The examiner's supervisor, Mr. Duane Smith, may be reached at (571) 272-1166. Any inquiry of general nature may be directed to the Group receptionist at (571) 272-0987. The centralized fax number for the Group is (703) 872-9306. The examiner Rightfax number is (571) 273-1158.

Betsey M Hoey

BETSEY MORRISON HOEY
PRIMARY EXAMINER

June 6, 2005